

Technical University of Denmark



Spring and autumn spawning herring in the Gulf of Riga: intraspecific biodiversity across small local scales

Bekkevold, Dorte; Gross, R.; Arula, T.; Ojaveer, Henn

Publication date:
2015

Document Version
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

Citation (APA):
Bekkevold, D., Gross, R., Arula, T., & Ojaveer, H. (2015). Spring and autumn spawning herring in the Gulf of Riga: intraspecific biodiversity across small local scales. Abstract from ICES Annual Science Conference 2015, Copenhagen, Denmark.

DTU Library

Technical Information Center of Denmark

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Spring and autumn spawning herring in the Gulf of Riga: intraspecific biodiversity across small local scales

Dorte Bekkevold, Riho Gross, Timo Arula and Henn Ojaveer

Herring has been one of the most important commercial fish species in the Baltic Sea for centuries. Based on spawning time (spring versus autumn), location of spawning grounds, larval ecology, growth rate and age of maturation, two distinct ecotypes have been described. Currently, spring spawning herring is strongly dominating in commercial catches and contributions from autumn spawning herring are almost negligible. Autumn spawning herring strongly dominated herring catches in the Baltic Sea historically, reaching up to 90% of catches a century ago. However, whether autumn spawning herring constitutes a reproductively and genetically isolated spawning component is unknown. The aim of the present study was to assess levels of genetic divergence between spring and autumn spawning herring in the Gulf of Riga using two types of DNA markers (microsatellites and Single Nucleotide Polymorphisms). Results from temporally replicated analyses show clear genetic differences between the spawning types and hence support reproductive isolation. The results have clear practical implications by pointing to the need for management of these two distinct spawning components separately. Therefore, the management scheme of herring in the area needs likely to be changed to manage exploited herring stocks sustainably, and specifically to allow rebuilding of autumn spawning herring.